

REMARKS

This is a full and timely response to the outstanding non-final Office Action mailed April 22, 2002 (Paper No.6). Reconsideration and allowance of the application and presently pending Claims 1-22 are respectfully requested.

Minor corrections have been made in the specification as suggested by the Examiner. Numbers 222 and 225 have been added to FIGS. 11 and 13, respectively, and the specification has been amended on pages 11, 12 and 14 to change numbers 124 to 122, 226 to 236 and 125 to 126. Claim 4 has been amended to overcome the rejection under 35 U.S.C. §112.

The Examiner has rejected Claims 1-2 and 7 under 35 U.S.C. §103(a) as being unpatentable over Van Den Nieuwelaar et al. in view of Hazenbroek et al. As indicated in the specification, shackles that are currently being used for weighing require the entire shackle and bird to be weighed together simultaneously. Specification, page 4, lines 3-4. The weight of the carcass is not determined as accurately when the entire shackle and wheels are being weighed as shown in Van Den Nieuwelaar et al. because of variations in the weight of the shackles.

In Applicant's invention, only the carcass, support rod 106, bird carrier 104 and wheels 112 and 114 are supported by the weighing scale track 102. See FIG. 6. Weighing only a portion of the shackle, as Applicant has shown, results in a more accurate measurement of the weight of the carcass as there is a greater margin of error with the increase of the weight of the shackle being weighed. The weight of the carcass is determined by subtracting the weight of the shackle without the carcass from the combination of the two. The greater the weight of the shackle, the greater the margin of error due to differences in wear and tear and variations between the shackles being weighed. It is easier to obtain a standardized weight for that portion of the shackle and wheels being measured by Applicant's invention than if the entire shackle were being weighed as being done in Van Den Nieuwelaar et al. Furthermore, Applicant's telescopic connector allows the carcass to be moved up and down while being processed through various stations. Van Den Nieuwelaar et al. shows no means for raising and lowering the shackle as needed for various processing stations.

The Examiner cites Hazenbroek et al., U.S. Patent No. 5,875,738, as disclosing a telescopic connector means, mentioning hanger rod 14 and lock collar 48 for telescopically connecting the trolley support to the bird carrier 12. Hazenbroek et al. discloses a tiltable poultry shackle as best illustrated in FIG. 3 of the patent. The purpose of the lock collar 48 in

Hazenbroek et al. is to hold the carcass hanger 12 in the tilted position as best illustrated in FIG. 5 of the patent. It does not serve the function of Applicant's telescopic connector means 118 which is designed to remove the weight of the tubular support 120 and turning means 108 from the support rod 122 and bird carrier 104, as best illustrated in FIG. 6 of Applicant's drawings. The purpose of the lock collar 48 in Hazenbroek et al. is to hold the hanger 12 in the tilted position. The lock collar 48 can rotate around the hanger rod 11. Col. 3, lines 29-33.

Hazenbroek et al. does not disclose or suggest a shackle and hanger arrangement where only a portion of the assembly is weighed. If one were to weigh the carcass on hanger 12 of FIG. 2 of Hazenbroek et al., the hanger rod 11, lock collar 48, hanger 12 and upper tab 20 would be weighed if the scale were placed on the overhead conveyor rail (not shown). The lock collar 48 in Hazenbroek et al. does move up and down on hanger rod 11 but only for the purpose of engaging lock recesses 58 to hold the carcass hanger 12 in the tilted position. Col. 4, lines 38-48. Consequently, if one were to combine Van Den Nieuwelaar et al. with Hazenbroek et al., one would have a shackle that tilts and not one that minimizes the weight of the shackle being weighted with the carcass as Applicant has invented. Hazenbroek does not show raising and lowering the poultry carcass as the Examiner has asserted, but rather tilting the carcass.

In respect to Claim 7, the Examiner asserts that Van Den Nieuwelaar et al. discloses a cam 28 for turning the bird carrier 4. Applicant's Claim 7 requires that the turning means has a cam. (108 as shown in FIG. 1) Applicant's cam is capable of turning the bird carrier 360°. Van Den Nieuwelaar et al. does not disclose a cam, but rather "a run-up part 28" (Col. 5, lines 41-52) which can only be turned a few degrees (e.g. 45°). Thus, Van Den Nieuwelaar et al. does not disclose a cam as required by Claim 7.

Claims 3-5 have been rejected on the basis of Van Den Nieuwelaar et al. in view of Hazenbroek et al. and U. S. Patent 2,456,224, to Sullivan. These claims are patentable over the combination of references for the reasons set forth above. Sullivan discloses a conveyor that is designed to lower or raise the load carrier at various stations. (Col. 1, lines 29-36) A piston 33 lowers cam bars 36, which in turn exerts pressure against rollers 22 to move the hook 31 into a lower position, as illustrated in FIG. 1 of Sullivan. (Col. 3, lines 27-39) The cross head 20 is pushed down by the axle 21 against the spring 25 to move the hook downwardly. Sullivan in no way discloses or suggests a shackle for weighing. Placing a scale above the wheel 22 of Sullivan would simply measure the strength of spring 25, which one clearly does not want to measure.

Applicant's shackle does not contain any spring exerting force against the wheels 112, as illustrated in Applicant's drawings by FIG. 1. Consequently, the combination of Van Den Nieuwelaar et al. and Hazenbroek et al. with Sullivan does not result in Applicant's invention. Sullivan does not disclose or suggest any way in which the carcass and a portion of the shackle can be weighed, as Applicant has achieved.

Claim 6 was rejected based upon the same patents on which Claims 3-5 were rejected. Applicant's means in Claim 6 is shown by the pin 209 as illustrated in FIG. 10. Specification, page 8, line 18- page 9, line 2. This pin 209 shows the location of the turning means 108. The Examiner indicates that boss 21 and guide track 29 of Van Den Nieuwelaar et al. indicate the angular position of the turning means. Boss 21 and guide track 29 of Van Den Nieuwelaar et al. cannot indicate the angular position of the turning means as required by Claim 6 as they are obscured from view by closing plate 27 as shown in FIG. 7. Neither of these are designed to serve the purpose of indicating the angular position of the turning means. Furthermore, Applicant shows the angular position by the use of a single pin 209.

Claims 8-9 and 13-14 have been rejected on the basis of Van Den Nieuwelaar et al. in view of Hazenbroek et al. and further in view of U.S. Patent No. 3,781,946 to Altenphol. The same argument made *supra* applies to these claims as well. It is not seen how Altenphol could be added to Van Den Nieuwelaar et al. and Hazenbroek et al. to obtain Applicant's invention. If one were to have a scale on Altenphol's track 22, it would weigh the entire apparatus with the carcass attached. As pointed out above, Applicant only weighs the carcass and a small portion of the shackle. The Examiner has asserted in respect to Claim 9 that Altenphol discloses that the overlapping ends 40 move axially in response to the trolley 20. Suspension link member 28, upper post portion 14 do not appear to move axially with respect to each other. They appear to be permanently attached to each other and shaft 26. The lower yoke arms 40 cannot move vertically, but only rotate around shaft 26. Therefore, Altenphol does not contribute anything to the combination of art referred to above.

Claims 10-11 and 13-14 have been rejected over Van Den Nieuwelaar et al. in view of Hazenbroek et al. and in view of Altenphol. These claims are patentable for the reasons cited above in respect to other claims. In respect to Claims 10 and 11, it should be pointed out that Hazenbroek et al. does not show raising and lowering the carcass, but only tilting it. In respect to

Claim 13, Altenpohl discloses that lower yoke arms 40 only rotate around shaft 26 and do not move up and down. (Col 2, lines 36-38)

The Examiner has rejected claims 15-18 on substantially the same grounds. These claims are patentable over the prior art cited in light of the arguments set forth above. Claim 16 has been rejected on the same grounds further in view of Smith (U.S. Patent No. 3,581,339). It should be noted that the Examiner has combined five patents in an effort to show this claim as obvious. It is not shown how it is logical to combine these references. Claim 15 has been amended to make it dependent upon Claim 10 to provide a basis for "said rod" in Claim 16. Smith discloses a slotted opening 50 and 51 (FIG. IX), but this is not a vertical rod but cross brace 49, which permits legs 39a and 40a to flex outwardly. (Col. 4, lines 38-41) The slots 50 and 51 have nothing to do with vertical movement of the shackle.

Claims 19-20 have been rejected as being unpatentable over U.S. Patent No. 4,488,635 to Linville in view of the U.S. Patent No. 4,896,399 to Hazenbroek. Claim 19 has been amended by adding a telescopic connecting means between the trolley support and the bird carrier. Linville does not accomplish this by telescopic means but rather by lifting the shackle by a precision chain 42 across the weighing platform 44. Col. 3, lines 18-28. Linville shows weighing the carcass and the entire shackle 22 and chain resting on the platform, as illustrated in FIG. 1. (Col. 3, lines 29-33) Applicant only weighs the carcass and a portion of the shackle. It is not logical to combine Linville and Hazenbroek (U.S. Patent No. 4,896,399) as Hazenbroek is not concerned with weighing carcasses, but with separating the parts of the carcass. (Col. 1, lines 7-11) Applicant's Claims 19 and 20 are only concerned with weighing a carcass and not cutting it into pieces.

Claims 21-22 have been rejected over Linville in view of Hazenbroek and further in view of Hazenbroek et al. (U.S. Patent No. 5,875,738). The Examiner has asserted that Hazenbroek et al. shows lifting the bird carrier 12. As pointed out above, Hazenbroek et al. only tilts the bird carrier 12 as clearly shown in FIG. 3. Thus Claims 21 and 22 are clearly patentable over the art cited.



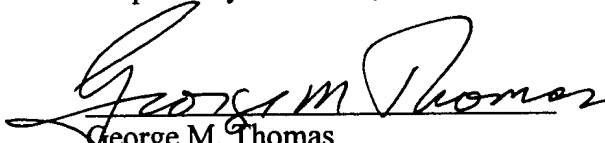
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CONCLUSION

It is believed that it has been shown that all claims in this application are allowable. An early and favorable Office Action is respectfully requested.

Respectfully submitted,


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ANNOTATED VERSION OF MODIFIED CLAIMS TO SHOW CHANGES MADE

The following is a marked up version of the amended claims. Amend the following claims by adding the language that is underlined ("___") and by deleting the language that is enclosed within brackets ("[]"):

4. The shackle assembly of claim 2, wherein said telescopic connector means further includes said tubular support and said rod [defining aligned openings] having aligned openings that pass transversely through said support and rod; and wherein said trolley includes a wheel axle extending through said aligned openings for engaging said tubular support and said rod; at least one of said aligned openings also being of larger breadth than a cross-sectional breadth of said wheel axle for permitting telescopic movement between said tubular support and said rod in a substantially non-rotating relationship.

15. The shackle assembly of claim [9]10, wherein one of said aligned openings is a slotted opening.

19. A method of processing poultry carcasses as the carcasses move along a poultry processing path and for weighing the carcasses on a weighing scale as the carcasses are moved along the processing path, the method comprising:
suspending the carcasses from a shackle having a trolley support with a trolley attached thereto and a bird carrier connected to said trolley support, and while the carcass is suspended:

 passing the trolley over the weighing scale;
in response to passing the trolley over the weighing scale, lifting the bird carrier by telescopic connecting means between the trolley support and the bird carrier with respect to the trolley support using the scale;

 weighing the carcass as the carcass passes over the scale;
 turning the carcasses about a vertical axis; and
cutting the carcass into segments.

**ANNOTATED VERSION OF MODIFIED SPECIFICATION TO SHOW CHANGES
MADE**

Page 10, line 16 - page 11, line 9:

Since the tubular support 120 is connected with the bird carrier 104, lifting the wheel axle 116 over a scale track will cause the weight of the bird carcass, tubular support, and bird carrier to be entirely supported by the axle. Thus, a carcass can be accurately weighed by simply rolling the wheels 112 and 114 over the scale track 102 in either the forward or reverse directions. The arrangement of the openings 124 and 126 also prevents the wheel axle 116 and tubular support 120 from rotating around the longitudinal axis of the rod 122 and keeps the wheels 112 and 114 properly oriented. The tubular support 120 and rod [124] 122 are therefore maintained in a substantially non-rotating relationship that reduces the likelihood of inaccurate measurements caused by an unstable hanger and/or carcass. Furthermore, if the wheel axle 116 is improperly aligned parallel to the weighing scale track, then the wheels 112 and 114 are likely to pass harmlessly between the two tracks without damaging the scale. Moreover, only the tubular support 120 and bird carrier 104 are lifted with the bird, instead of the entire hanger assembly 100. Consequently, less weight compensation is required in order to arrive at the accurate weight measurement for just the carcass.

Page 12, lines 3-16:

A second embodiment of a shackle assembly is shown in Figs. 10-13. In this second embodiment 200, the support rod 222 is formed in two detached portions 222A and 222B. The upper portion 222A of the rod 222 forms the trolley support 206 while the lower portion 222B of the rod 222 is formed in one piece with the stirrups 205 in order to create the bird carrier 204. In this embodiment, the telescopic connector means 218 for connecting the trolley support 206 to the bird carrier 204 includes the tubular support 220 being secured to the upper rod portion 222A. The lower portion 222B of the rod 222 in bird carrier 204 then slides into the central passage 236 (Figs. 11 and 13) defined by the tubular support 220. Since the tubular support 220 is now fixed to the trolley support 206, rather than the bird carrier 204, the breadth of the tube opening 224 is now made larger than the breadth of the rod opening [226] 236 in order to provide telescopic movement between the trolley support and the bird carrier. In particular, the tube

opening 224 is a slot having a width generally corresponding to the diameter of the wheel axle 216 and a length chosen for an appropriate range of vertical movement.

Page 13, line 19-page 14, line 6:

The embodiments discussed above provide an improved shackle design for which latching and unlatching mechanisms are not required during weighing. The shackle can go over the scale facing either forward or backward and thus requires less turning in order to position the shackle for weighing. Since the shackle assemblies 100 and 200 are more stable as they go over the scale, and since only a portion of shackle assembly is supported by the scale, more accurate weight measurements can be obtained at high conveyor speeds. In addition, the bird carriers 104 (and 204) will not separate from their respective trolley supports 106 (and 206) during normal use and cleaning without first removing the wheel axles 116 (or 216) from the openings 124 and [125] 126 (or 224 and 225).